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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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June 30, 1988

Mr. Michael W. Glasson  
Senior Geologist, Western Operations  
Andalex Resources, Inc.  
P.O. Box 902  
Price, Utah 84501

*Mike*  
Dear Mr. Glasson:

Re: Second Completeness Review, Andalex Resources Wildcat Loadout,  
PRO/007/033, Folder #2, Carbon County, Utah

Attached is the Division's Second Completeness Review for the revised Wildcat Loadout Permit Application Package (PAP) received in this office on May 16, 1988.

As you will note significant deficiencies still exist with the PAP. In order to assure that the response to this review is complete and adequate, the Division is requesting that you and your hydrology consultant meet with Division technical staff on July 12, 1988 at 10:00 a.m. in the Division offices in Salt Lake City. Please contact me if the date and time set for the meeting is not convenient for you.

It is imperative that your complete and adequate response to this review be submitted to the Division no later than August 1, 1988. Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Lowell'.

Lowell P. Braxton  
Administrator  
Mineral Resource Development  
and Reclamation Program

as

cc: Robert Hagen  
Peter Rutledge  
Technical Review Team  
0800R/77

COMPLETENESS REVIEW  
(REVIEW OF RESPONSE TO INITIAL COMPLETENESS REVIEW)  
WILDCAT LOADOUT  
ACT/007/033

Andalex Resources, Inc.  
June 30, 1988

UMC 771.25 Permit Fees-(BAS)

Evidence of payment of the \$5.00 permit fee must be incorporated in the Permit Application Package (PAP).

UMC 783.19 Vegetation Information-(BAS)

(a) Before the PAP can be determined complete, the applicant must provide quantitative data derived from vegetation sampling on the reference area. These data must include species composition and frequency, percent cover, and shrub density.

UMC 783.20 Fish and Wildlife Resources Information-(BAS)

(a) The "Fish and Wildlife Plan" on page 50 appears out of place. Introductions of Appendix E, part 2, and Appendix F would fit better in section H.1. on page 46. The rest seems to belong with the introduction of the "Fish and Wildlife Plan", Chapter IV, page 116. Please make these revisions.

Section H.2., page 46, must clearly identify which data are meant for references cited.

Table III-8 must list the Great Horned Owl as a species occurring on the lease area. The raptor resource narrative on page 47 must describe the 1988 owl nest attempt and nest-site manipulation.

UMC 783.21 Soil Resources Information-(JSL)

Baseline soil physio-chemical data must be submitted before the PAP can be determined complete. The operator stated that soil samples have been submitted to a laboratory for analysis and that this information will be submitted to the Division upon receipt. This section will be considered complete upon receipt of required soil physio-chemical characterization data.

UMC 783.24 Maps: General Requirements-(PGL)

(1) The permit area should logically follow the property line and include the access road to the Consumer's Road turnoff. The permit area must be revised to reflect these changes.

Documentation by Andalex Resources must be provided in the PAP that demonstrates right of entry to operate on Beaver Creek Coal Company's leased land.

UMC 783.25 Cross Sections, Maps, and Plans-(JRF)

Plate 1 does not have a certification stamp. Diversion UD-1 must be in the permit area.

UMC 784.13 Reclamation Plan: General Requirements-(BAS)

(b)(5)(i) The PAP must include a revegetation schedule similar to the one in Appendix A, "Revegetation Guidelines for Utah Coal Regulatory Program."

(b)(5)(ii) Shrub plantings and a drainage area seed mix are described on page 80 but in a non-specific manner and do not appear elsewhere in the PAP. Please explain how this relates to the overall reclamation plan.

(b)(5)(iii) The Reclamation Plan (page 69) states that the entire area will be hydroseeded, whereas the Revegetation Plan (page 78) states that seed will be sown with a rangeland drill. This discrepancy must be corrected.

(b)(5)(iv) Page 78, Section 5.6 suggests that a type of mulch other than wood fiber hydro-mulch may be used. An alternative type of mulch must be clearly described or the statement deleted. If hydro-mulch is used, it must be anchored with a chemical tackifier and applied in an operation separate from that of seeding. To further reduce erosion and promote water retention, the seedbed should be left rough.

(b)(5)(v) The PAP (page 80) must state that no persistent pesticides will be used, unless approved by the Division.

(b)(5)(vi) The PAP cannot be considered complete until the reference area has been fenced and identified on Plate 1.

There is repeated mention of reference areas established by the Soil Conservation Service (SCS) (i.e., page 42, Section G.1.; page 76, Section 5.1; and page 77, Section 5.4). Although the SCS assessed production and range condition of two range sites, the applicant and Division established the reference area. Please modify the language accordingly.

The PAP must include a revegetation monitoring schedule like that in "Revegetation Guidelines for Utah Coal Regulatory Program," Table 1. Quantitative monitoring is required during years two, three and five on permanent reclamation.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance-(JRF)

(b)(1) The applicant must include Pond F in the NPDES permit. A copy of this permit must be incorporated in the PAP.

(c) The PAP must contain a determination of the probable hydrologic consequences. This information was requested in the previous Initial Completeness Review.

The Division requested that leachate analysis be performed on all materials stored on site. The applicant has committed to performing the required analysis. Please submit data attendant to the leachate tests.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments-(PGL)

(a)(1)(7) Certification of the ponds in Appendix H is not adequate. Certification must attest that the constructed ponds "meet the required performance standards outlined in UMC 817.46." The pond certification should be similar to the road certification on Plate 17. Please correct.

UMC 784.21 Fish and Wildlife Plan-(BAS)

(b)(2) Andalex must commit to correct known hazards to big game within the permit area in the event recurring mortalities occur due to fence entanglements, drownings, deer-vehicle collisions, etc.

In a letter to Andalex, the U.S. Fish and Wildlife Service (USFWS) asked for a design modification in the power transmission line (Appendix B). Modification must either be completed or a new USFWS clearance obtained. A clearance letter must be included in the PAP, Appendix B.

(b)(3) The applicant must compensate for loss of critical-valued deer and elk winter range incurred since Andalex Resources, Inc. commenced operations at the Wildcat Loadout. Previous mitigation, identified in Appendix E, shall count toward the mitigation requirement. However, Utah Division of Wildlife Resources (DWR) contends that only 13 acres were enhanced rather than the 21 asserted by the applicant. Please document exact acreage that has been disturbed and mitigated. If less area has been mitigated than disturbed, appropriate commitments to compensate for the entire acreage must be included in the PAP.

UMC 784.23 Operation Plan: Maps and Plans-(PGL)

(b)(2) The permit area must be revised (see UMC 783.25, UMC 784.24 and UMC 783.24[1]).

(b)(3) "Bonded area" on Plate I must be indicated as such on the map with appropriate legend and designation.

UMC 784.24 Transportation Facilities-(PGL)

The Class I access road must be included in the permit area from the turnoff at Highway 139; this will clearly designate responsibility for Andalex Resources to maintain and reclaim roads.

Typical road cross sections, Plate 17, portray "paved" and "unpaved" sections, however, the PAP, page 120, states that "Class I roads within the permit area were constructed using surface gravel and magnesium chloride." Please explain and correct the discrepancy.

JW  
1539R1-4

TECHNICAL DEFICIENCIES  
WILDCAT LOADOUT  
ACT/007/033

Andalex Resources, Inc.  
June 28, 1988

UMC 817.22 Topsoil Management-(JSL)

Since topsoil salvaging did not occur due to previous disturbance of the site, the requirement for topsoil substitute material exists. To allow the Division to make its finding of reclaimability, the proposed substitute topsoil material must be quantified and suitability demonstrated.

The PAP must include the location, volume, physiochemical characteristics of the substitute material coupled with a field site in situ disturbed soil revegetation study plot. The study plot should be installed in the same manner as described in the reclamation plan. The location of the study plot and the potential substitute soil material should indicate all soil sample points. The specific agronomic practices to be implemented will be dependent upon the outcome of the substitute soil data. The potential substitute material must be identified as such on site with a sign and must be protected from wind and water erosion and contaminants as required under UMC 817.23.

The submittal does not adequately define the topsoil or potential topsoil substitute stockpile protection measures. The exact seed mix must be included in the PAP.

UMC 817.41 Hydrologic Balance: General Requirements-(JRF)

(b)(2)(v) Use of conveyor belting as ditch erosion protection (Ditch D-1) does not meet the criteria of this regulation. The applicant must design and install acceptable erosion protection for Diversion Ditch D-1. Properly designed riprap, check dams, or concrete channel lining will be acceptable.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations-(JRF)

The Division cannot approve the Small Area Exemption (SAE) acreage (adjacent to topsoil storage) or use of vegetation as an

alternative sediment control without data demonstrating non-degradation of water quality to the receiving drainage. The Division recommends using a berm to contain runoff from the proposed SAE.

UMC 817.43 Hydrologic Balance: Diversions and Conveyance of Overland Flow, Shallow Ground Water Flow, and Ephemeral Streams-(JRF)

Significant problems exist in design for disturbed and undisturbed diversions. The Division recommends that a design conference be held with Andalex Resources personnel to discuss an approvable diversion plan.

The applicant's disturbed area diversion design methodology is not acceptable. Peak flow values are grossly miscalculated, Manning's n values cannot be approved, ditch slope values do not agree with topographical maps, ditch area calculations are not adequate, and velocity values are 80-100 percent lower than Division calculations.

Designs for undisturbed Diversion UD-1 cannot be approved. Plates 2 and 15 do not contain adequate elevations to determine how runoff from the natural drainage will enter UD-1. The present field configuration of UD-1 does not conform to the configuration portrayed on Plate 2. The application does not contain information about reconstructing UD-1. Figure IV-1 does not contain a scale; please provide. Peak flow values for the undisturbed area are over-estimated. The Manning's n value appears unrealistic. Please justify. The Division's depth of flow and freeboard calculations indicate that the ditch will not contain the design event (10y-24h).

Further problems exist with the diversion designs as follows:

- o The applicant has used an open channel flow methodology to calculate pipe flow (culverts); this is unacceptable.

- o Several culverts are not identified on Plate 2, two on Ditch D-1 and one culvert on Ditch UD-1.

- o Channel velocities between 3-5 feet per second (FPS) are considered erosive for the site soil type. Erosion protection will be required on all ditches, culvert outlets, and pond spillways with flow velocities exceeding 3 FPS.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds-(PGL)

Stage-discharge curves must be submitted demonstrating the principal spillway is capable of passing the design flow. Assumptions used in the preparation of the curves must also be included and referenced.

(j) Proposed Pond E and as-built Ponds B, D and F portrayed on Plates 6, 4 and 7 respectively, illustrate an emergency spillway without one foot of compacted embankment above, as required. Please adjust accordingly.

Proposed Pond E will short circuit with the locations of inlet and spillways shown on Plate 6. Pond C configuration (Plate 5) also shows potential for short-circuiting by the location of the inlet vs. emergency and primary spillways. The inlet should be on the opposite side of the outlet. Revise plans accordingly.

Emergency spillway capacity must be demonstrated to contain the 25-year, 24-hour event. Designs for the length and width of the spillway, size of riprap, and filter blanket must be included in the PAP (a "typical" drawing is adequate).

Embankments and slopes shown on the "cross-sections" do not match the slopes from the "plan view" or the slopes in Table IV-7. Outside slopes cannot be computed from the "plan view" to derive cross-section "on the plates". All plates and tables must be consistent, and accurate. Revise accordingly.

(r) Certification of all ponds stating that they "meet the required performance standards of UMC 817.46" must be incorporated into the PAP (see UMC 784.16[a][1][7]).

UMC 817.47 Hydrologic Balance: Discharge Structures-(PGL)

A commitment is required by the applicant to implement an outlet protection plan within 30 days of erosion detection. The outlet protection plan must include a typical drawing of the filter blanket, size of riprap, and length and width of the protection.

UMC 817.48 Hydrologic Balance: Acid-Forming and Toxic-Forming Materials-(JSL)

No data has yet been submitted. The Division cannot make a determination of potential acid- or toxic-forming materials until this information has been evaluated. Please submit this information immediately.

UMC 817.52 Hydrologic Balance: Surface and Ground Water Monitoring-(JRF)

As previously required (February 12, 1988 ICR) leachate data must be submitted to determine if ground-water monitoring will be required. The applicant has not submitted data from two temporary observation boreholes as previously requested. Discussion in the PAP indicated that water in the boreholes did not exist. The applicant must either submit the data (leachate and observation well) or install a monitor well.



UMC 817.56 Hydrologic Balance: Postmining Rehabilitation of Sediment Ponds, Impoundments, and Treatment Facilities-(JRF)

During Phase I reclamation, Pond E runoff will be routed to Pond D. Table IV-7 indicates that Pond D will not contain the design event. Furthermore, the postmining drainage pattern on Plate 8 does not clearly delineate the routing of disturbed area runoff to the ponds. Please clarify.

The PAP must include specifics for reclamation of the impoundment west of the railroad tracks.

The PAP must include designs in the reclamation plan for the drainage west of the railroad tracks. A pre-design meeting with Division personnel is strongly recommended. As previously requested, detailed design plans must be submitted for the reclaimed disturbed area drainage. Channel size, drainage area, velocities, and erosion control plans must be included.

Diversion UD-1 requires complete reclamation. The PAP must include these designs in the reclamation plan.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials-(JSL)

No data has yet been submitted. The Division cannot make a determination of potential acid- or toxic-forming materials until this information has been submitted. The exact physio-chemical characteristics of the waste material must be quantified to determine an adequate management plan and potential mitigation plan if potential acid- or toxic-forming conditions exist.

The location of the waste disposal site must be specific. The plan indicates that a disposal site may be used outside of the permit area. Please note that all waste material must be disposed of within a permitted area. Please submit data and a disposal plan immediately.

UMC 817.106 Regrading or Stabilizing Rills and Gullies-(PGL)

A misleading commitment inferring that rills and gullies will only be stabilized during operations is included on page 76. This must be revised. The commitment must include a statement that "when rills or gullies deeper than nine inches form in areas that have been regraded or topsoiled, the rills and gullies will be filled, graded or otherwise stabilized and the area reseeded or replanted. Rills and gullies of lesser size will be stabilized and the area reseeded or replanted if the rills or gullies are disruptive to the approved postmining land use or result in additional erosion and sedimentation."

UMC 817.150-.156 Roads: Class I-(PGL)

Class I roads described on page 120 must be included in the permit area (the access road to the Consumer Road turnoff). Boundaries for reclamation must be clearly delineated (see UMC 783.24[1], UMC 783.25 and UMC 784.24).

JW  
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